

Yoon *et al.* postulate on page 2075 of the reference that it is probable that the gene correction event is mediated by a specific mismatch repair system. Furthermore, highly efficient repair activity has been observed in nuclear extracts prepared from several mammalian cell lines. There is no suggestion in the reference to utilize the method in plant cells or even speculation to suggest that the repair mechanism would function in plant cells. Furthermore, it is noted that the target gene of Applicant's claimed invention has been introduced into the plant genome. Yoon *et al.* merely demonstrates that correction of a point mutation can be accomplished on an extra-chromosomal plasmid in mammalian cells.

As the Examiner is aware, methods for manipulating nucleic acid sequences, transforming cells, and gene targeting that are successful in mammalian and fungal systems have not always been effective when applied to plant systems. Furthermore, there is no teaching or suggestion in the art cited by the Examiner that the method disclosed by Yoon *et al.* would work in plants. In fact, Yoon *et al.* never suggests that the system could be used in plants.

The secondary references cited by the Examiner do not satisfy the deficiencies noted above for the primary reference. Spencer *et al.* (US Patent No. 6,040,497) is drawn to glyphosate resistant maize lines. Fertile transgenic maize plants are provided by transformation of a maize plant with a mutant EPSPS gene. While the patent provides glyphosate resistant maize lines, these lines are produced by transformation with a chimeric gene. The entire chimeric gene is inserted into the maize genome. There is no teaching or suggestion to use the method of the invention of introducing RNA-DNA hybrid oligonucleotides to alter genes or predetermined sites in the plant genome.

Perbal discusses oligonucleotide-directed mutagenesis. The Examiner has provided several pages from a 1988 *Guide to Molecular Cloning*. The discussion involves synthetic oligonucleotide single-based modification of plasmid or phage DNA. The method involves generating a mutant genome and then introducing the new molecule into a host cell. The reference does not even teach that such modification can be made in a bacterial cell, let alone a plant cell.

Meisenberg and Simmons discuss changes in the base sequence of DNA. The reference does nothing more than provide definitions for changes in DNA such as point mutations, transition, transversions, deletions, insertions, frameshift mutations, translocations, and the like. There is no discussion of how to make such changes in any cells including plant cells.

Gherzi *et al.* describes the genomic organization of the 5'-region of the human tenascin-C gene and the functional characterization of its promoter. There is no discussion nor suggestion of the inactivation of a plant gene through the mechanism set forth in the pending claims.

Clearly the combination of references cited by the Examiner does not teach nor suggest the claimed invention. First, merely because base changes or single nucleotide additions are in the art, (as the Examiner notes is taught by Perbal and Meisenberg *et al.*) is no indication that one of skill in the art could have inactivated a plant gene by the method set forth in the claimed invention. In fact, it is not clear what any of the secondary references add to the Yoon *et al.* reference.

Secondly, there is no motivation in the art to combine any of the cited references. The Examiner has merely used Applicant's claims as a guide and selected references at random that mention various aspects of the claimed invention. Such is an inappropriate combination of references. The law is clear that without motivation to combine the references, a rejection under 35 USC §103 fails.

For all these reasons, the combination of references does not teach the claimed invention and the rejection should be withdrawn.

#### Conclusion


It is submitted that the claims are in condition for allowance. Early notice to this effect is solicited. If in the opinion of the Examiner, a telephone conference would expedite the prosecution of the above-referenced application, the Examiner is invited to call the undersigned attorney.

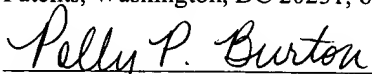
Consideration Of Previously Submitted Information Disclosure Statement

It is noted that an initialed copy of the PTO Form 1449 that was submitted with Applicants' Information Disclosure Statement filed September 22, 2000 has not been returned to Applicants' representative with the Office Action. Accordingly, it is requested that an initialed copy of the Form 1449 be forwarded to the undersigned with the next communication from the PTO. In order to facilitate review of the references by the Examiner, a copy of the Information Disclosure Statement and the Form 1449 are attached hereto. Copies of the cited references were provided at the time of filing the original Information Disclosure Statement, and, therefore, no additional copies of the references are submitted herewith. Applicants will be pleased to provide additional copies of the references upon the Examiner's request if it proves difficult to locate the original references.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

  
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In re: Baszczynski *et al*

Appl. No.: 09/579,784

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**Version with Markings to Show Changes Made:**